OK, so now you're convinced Adapted Computer Technology is a good idea and something that your campus should make available to disabled students, but where does the money come from to buy the equipment, train the staff, pay salaries and all the rest? It can and has been done and perhaps more easily than you might imagine.

By Martha Kanter
Assistant Deputy Chancellor
California Community Colleges Chancellor's Office
Sacramento, California

Introduction

The rapid growth and increasingly sophisticated use of computers and other emerging new technologies demand that college students have immediate access to equipment and software. Many universities across the country are developing microcomputer networks, computer laboratories and classrooms in order to take instructional advantage of these new technologies. All students must have access to these new classrooms, instructional methods and techniques.

More recently, microcomputers across the postsecondary curriculum are being introduced, most usually with a 2-4 week introduction to computer use. What about a student with a disability who needs a particular computer accommodation? Consider assignments that must be completed in a computer lab or in the library's computer room. Will this equipment be made accessible to students with physical disabilities? What thought is being given to these and other problems in providing access to all students as colleges plan their expansion into these new technological worlds?

Since the passage of the Civil Rights Act of 1964 and the Rehabilitation Act of 1973, as admission to college has become more equitable to groups previously excluded on the basis of race, age, sex or disability, more disabled students are attending institutions of higher education. In fact, the recent Harris Poll completed in March, 1986, entitled "The ICD Survey of Disabled Americans" states that 14% of all disabled persons between the ages of 16 and 64 are college graduates. California statistics from a recent report from the California Post-secondary Education Commission show a dramatic growth in the disabled population throughout all segments of public higher education. In the community colleges alone, the number of disabled students increased fivefold from 5,000 to over **50,000** in this past decade since the inception of Section 504 of the Rehabilitation Act of 1973. Colleges have responded to meet the educational needs of these nontraditional students through providing support faculty and staff charged with ensuring adequate and appropriate accommodation.

8.2

Typically, a campus has employed or appointed one of its staff as administrator or dean of student services with responsibility for providing equal access for students with disabilities. For example, in private universities such as Yale or Stanford, the Director of Disabled Student Services carries out responsibilities for providing support services to students with disabilities. Similarly, in public institutions such as the 106 California community colleges, each college has a Director of the Disabled Students Program. While titles and positions vary from campus to campus, the jobs are the same-accommodating disabled students on the college campus.

As colleges address microcomputer access for disabled students, the Disabled Student Services Director-whether faculty member, administrator or

dean-will find a way to assist disabled students in surmounting any educational barriers encountered on their way toward graduation and employment.

How will my college provide microcomputer access for Joanne who has only one hand? Or for Roger who is blind? Or for Fred who has cerebral palsy?

Investing in the Idea and Demonstrating the Need

Whether a particular disabled student first experiences difficulty gaining access to a microcomputer or whether a faculty member or director of disabled student services engaged in comprehensive institutional planning addresses the problem before any barriers have been identified, the need is the same: *providing disabled students access to microcomputers.*

It is difficult to imagine why any college would not want to provide such access, but lack of funds is a common reason for not going ahead with a good idea, much less a requirement of a curriculum which must be made fully accessible to any student who has been admitted to the college or university.

So, it becomes the job of the Disabled Student Services Director to find a way to do it. Investment in the idea is perhaps the strongest factor in developing this resource for disabled students. Most importantly, having the ongoing vision of students with disabilities accessing microcomputers (and any other hardware or software device available on a college campus, for that matter) as an integral part of their undergraduate or graduate education makes it rather easy to find money to fund the high tech center.

What are the steps?

First, some strategic planning is in order. Putting together a prospectus will help the idea take shape and be communicated to others who will assist in resource acquisition. The goal is simple. Translating the goal into action requires energy and commitment. The plan should be concise and convincing. It should encompass the following elements:

1. **Statement of purpose**
   a. **how microcomputer access is an integral part of the college or university mission**
   b. **characteristics of the students who will be assisted**
   c. **how the educational process will be improved**
2. **Statement of need**
   a. **description of how the director, faculty and/or students have demonstrated that the need exists (perhaps a survey has been conducted, student and/or faculty interviews held, examples of course requirements made available, etc.)**
   b. **if necessary, other colleges or universities around the country can be cited as model programs (take advantage of what has been done already)**
3. **Objectives and activities**
   a. **list the steps to carry out the microcomputer acquisition and training plan**
   b. **describe how students will be accommodated, who will provide the training, what equipment is needed, where the main sites exist for adaptations to be made available (i.e., library, specific classrooms, learning center, etc.)**

4. Budget
    a. set up several hypothetical scenarios (i.e., providing accommodation for individual students, for a department, or across the campus)
    b. attach a budget to each scenario which includes one-time equipment purchase or adapting existing equipment on campus, specific adaptations, staff supervision costs, ongoing supplies and materials (i.e., computer paper)

Sharing the Vision

Once the basic plan is in order, evaluate your particular campus culture and identify your strongest advocates for the project. Most likely, several disabled students, a couple of interested faculty members, occasionally a disabled faculty member or administrator, someone from the college Finance Department and one or two community resource persons will comprise the team. It is important to remember that you can't do it alone. A good idea will be supported by many people and it is important to have the benefit of a team as there will be many spin-off components to your plan which, at this stage, you may not have yet considered.

How is this vision best shared? Establish a task force, informal network or college consortium and call a meeting for the purpose of reviewing your outline and helping with the formation of the vision. It is in this stage that the needs assessment can be conducted-perhaps a survey of existing disabled students and faculty members. Staff and students should be included in the planning effort. Sometimes a catchy title helps with this phase.

For example, "Monterey Peninsula College Advisory Committee on Microcomputers and Disabled Students." Or "Dean Thatcher's Ad Hoc Committee on High Technology and Students with Special Needs." Better yet, "President Johnston's Commission on Microcomputers, Disability and Higher Education." At this meeting, consider bringing in an outside resource person to illustrate how disabled students will be helped in this effort. Or have some interesting microcomputer demonstrations, showing how disabled students can be easily accommodated. You may also want to consider a panel of one or two disabled students discussing the problem and providing examples of the "vision."

8.6 Finding the Start-Up Money

As sharing the vision will be an ongoing part of making computer access a reality on your particular campus, a concurrent effort must be undertaken as quickly as possible to find seed money to start the terminal rolling. All possible sources of revenue for this project must be considered. At Monterey Peninsula College, it was especially helpful to work with the Director of Fiscal Services. Mr. Don Young was most knowledgeable about funding sources and, as it happened, he was also committed to providing computer access for disabled students. A neophyte computer user at the time, he was especially interested in learning about new microcomputer adaptations. The project was exciting, and many of the software adaptations were drawn from business or industry and were never designed with the disabled population in mind. Some possible sources of funding to consider are:

1. **Student services special funds for nontraditional students**
2. **Instructional equipment funds**
3. **President's or Chancellor's discretionary funds**
4. **Service club funds (e.g., Kiwanis, Rotary, Quota, Soroptimist)**
5. **Foundation sources (e.g., Handicapped Funding Directory)**
6. **Local grantsperson or community grantsperson**
7. **Public service TV campaign**
8. **Telephone campaign**
9. **Establishment grant from the Department of Rehabilitation**
10. **Student clubs-make this a student project**
11. **Other community resources**
12. **Special grant funding**
13. **Public service agencies**
14. **Vocational Education Act funds**
15. **Alumni fundraising activity**
16. **Special event (i.e., sporting event or concert) earmarked for this project**
17. **College or university trustees who may have a special interest in this kind of project.**

For public sector colleges and universities, the budgets are public documents and should be searched for all possible sources that might be tapped for the project. The support of Finance and Administrative Department personnel cannot be emphasized enough. If they are invested in the idea, then enthusiasm and excitement will be generated and unsuspecting sources

found which you and/or members of your team can pursue.

At Monterey Peninsula College, two subprojects were initiated to accommodate two disabled students with severe orthopedic impairments who needed unique and specialized systems in order to use microcomputers. One project raised $3,000 for one student and another $35,000 so that both students could have specialized augmentative communication systems to access microcomputers on a daily basis. In these efforts, community service clubs and private donors gave funds through separate accounts set up through the Easter Seal Society as the college's function and mission was to provide on-campus accommodation.

Broadening the Vision

Concurrently, you will want to ensure that a small group of three to six individuals serves as the project steering committee. A first task of this group will be to appoint a project director and share responsibilities in the tasks outlined above. A second task for all of the members will be to spread the word about the project and essentially sell the idea to the at-large campus community. Talk it up! College and university faculty and staff make approximately 200 contacts with different individuals each week. At meetings you attend or when you are interrupted during the day by someone who has an important question, take a few minutes to give the project the visibility it needs. If there are five people on your steering committee, multiply 200 x 5. The opportunity for 1000 contacts each week will certainly help you build the kind of network you need so that others can share the vision.

At the same time, it is critical to stage one or two events on campus as well. For example, Yale University held a two-day "Forum on Adapted Computer Tech nology Systems" and invited several national speakers as well as local vendors to the campus computer center to display microcomputer adaptations for students with disabilities and to discuss adapted computer technology in general, research implications and funding strategies. Another example was to have one or two faculty and several students go on cable television, demonstrate the adaptations and discuss the need for microcomputer access to a wider audience. A call-in number should be made available so that those wishing to participate or provide funds can do so. The net result of these kinds of activities is a broader shared vision which will help the project succeed.

8.10

Adapted Computer Technology- A Campus Reality

Finally, it is important that the evolution of a high tech resource center on campus develop from within so that departmental faculty will be continually involved in its operation, both from the standpoints of curriculum and referral. As faculty are becoming increasingly aware of adapting their curricula for microcomputer usage, and as more individuals with disabilities are able to attend institutions of higher education, the curriculum of the future will be increasingly dependent upon microcomputers. It is in this light that access considerations must be addressed so that disabled students can be accommodated in all phases of new curricular requirements and assignments. As the field of cognitive science continues to demonstrate how information is processed and learned in numerous modes and

through a variety of channels, it is likely that the requirements of access for persons with disabilities will take on new dimensions. In fact, being blind may become a new and different experience given new adaptations that are introduced for purposes of accommodation. Faculty involvement becomes crucial from a research standpoint as well. As interdisciplinary work continues in the fields of rehabilitation engineering and computer science, we can expect to reap the benefits of improved microcomputer adaptations for students with disabilities. New developments in these fields can be field tested in these sites, and adapted computer technology studies conducted. The public policy implications of providing adapted computer technology for students with disabilities are far reaching on several levels. The most basic is affirmative action. With available adapted computer technology, disabled students will be accommodated on campus. The university or college will continue its commitment to a comprehensive student body, representative of all groups, including the disabled. On a second and perhaps broader level, the disabled, the most severely underrepresented minority group in the country, will have increased opportunity to achieve their educational goals and succeed in post-secondary education and employment.